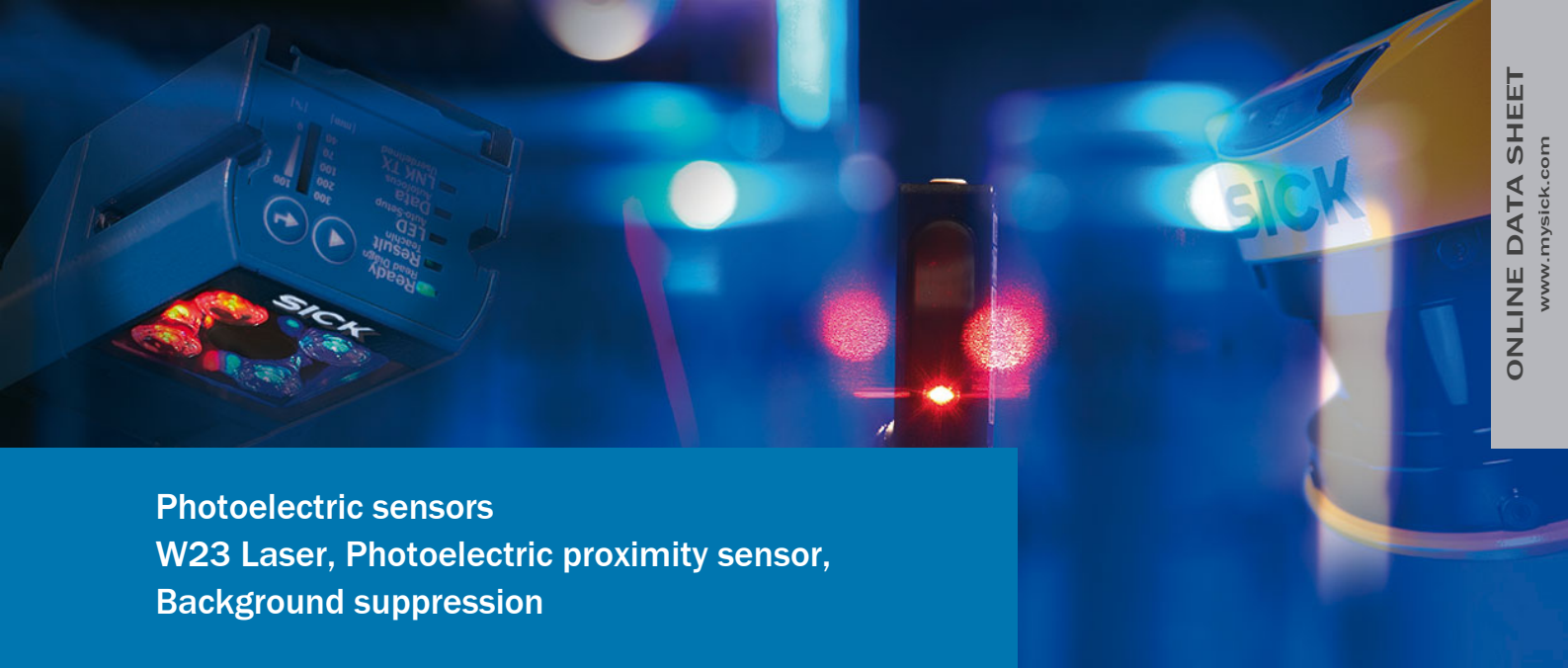




Photoelectric sensors
W23 Laser, Photoelectric proximity sensor,
Background suppression

WT23L-F430



Photoelectric sensors

W23 Laser, Photoelectric proximity sensor, Background suppression

Model Name > WT23L-F430
Part No. > 1045643



Illustration may differ

At a glance

- 2 mm light spot diameter at 400 mm range
- Visible red light
- Class I laser
- Precise background suppression

Your benefits

- Precise detection of small objects due to the miniature 2 mm light spot at 400 mm
- No laser safety measures required due to the Class I laser
- Red laser light for quick and easy alignment
- Familiar potentiometer adjustment ensure simple adjustment of the sensing range



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	24.6 mm x 80 mm x 53.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	50 mm ... 800 mm
Sensing range:	100 mm ... 800 mm
Type of light:	Visible red light
Light source:	Laser ¹⁾
Laser class:	1 (IEC 60825-1)
Wave length:	880 nm
Adjustment:	Potentiometer
Light spot size (distance):	Ø 2 mm (400 mm)

¹⁾ Average service life 50,000 h at T_A = +25 °C

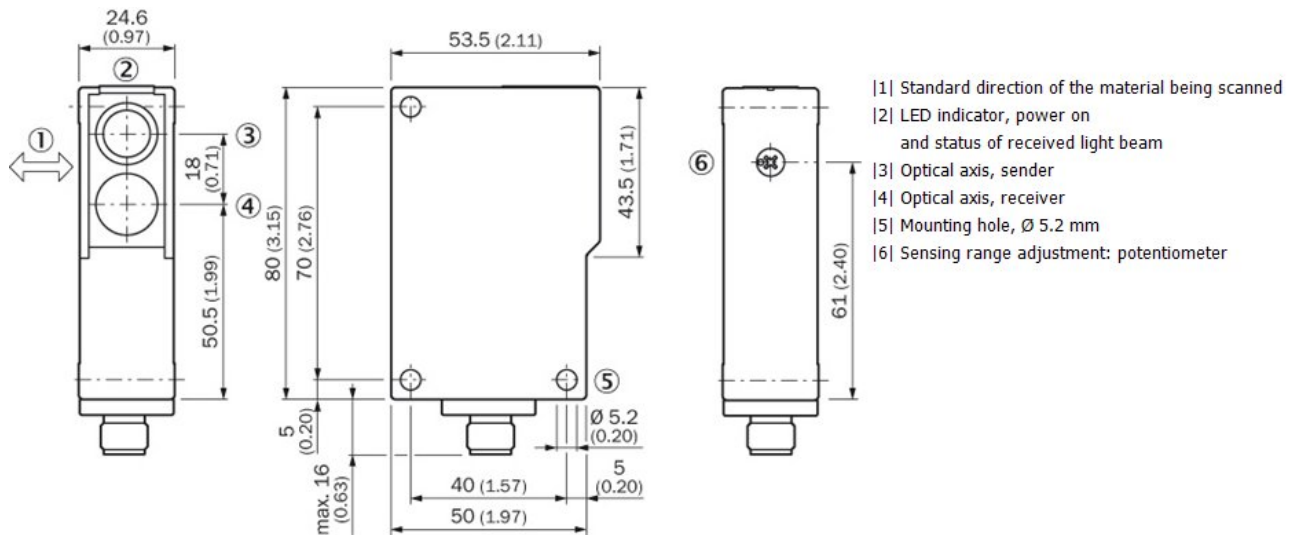
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Power consumption:	≤ 35 mA ²⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max} ..:	≤ 100 mA
Response time:	≤ 25 ms ³⁾
Switching frequency:	50 Hz ⁴⁾

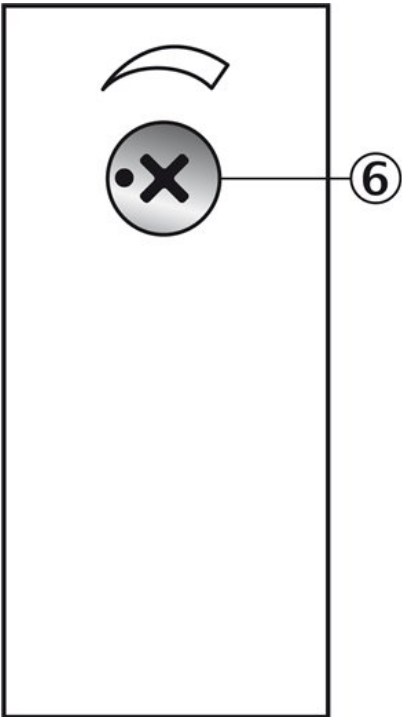
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ^{5) 6) 7)}
Protection class:	II ⁸⁾
Weight:	100 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 65
Ambient operating temperature:	-10 °C ... 45 °C
Ambient storage temperature:	-10 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values ²⁾ Without load ³⁾ Signal transit time with resistive load ⁴⁾ With light/dark ratio 1:1 ⁵⁾ A = V_S connections reverse-polarity protected ⁶⁾ C = interference suppression ⁷⁾ D = outputs overcurrent and short-circuit protected ⁸⁾ Reference voltage 50 V DC

Dimensional drawing

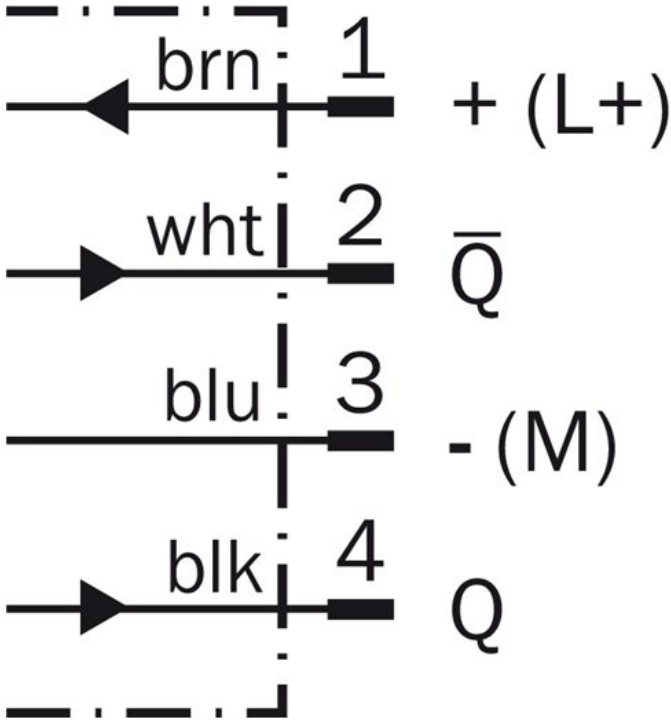


Adjustments possible

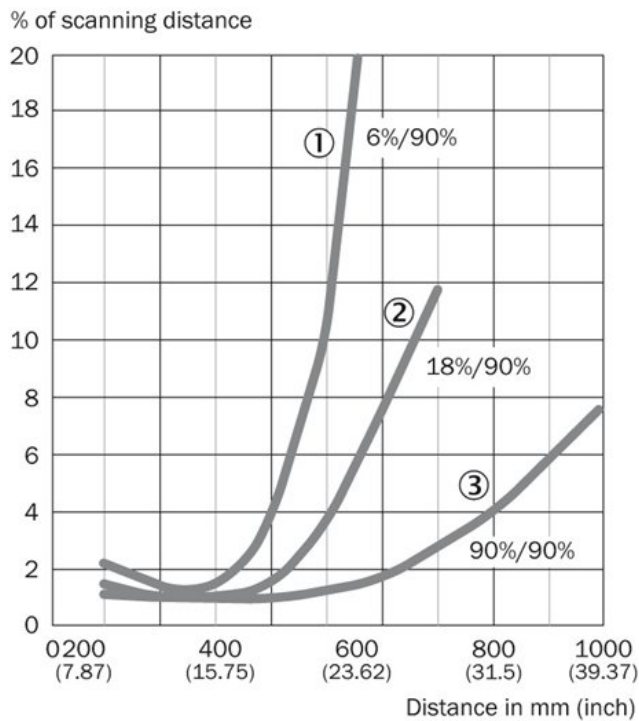


|6| Sensing range adjustment: potentiometer

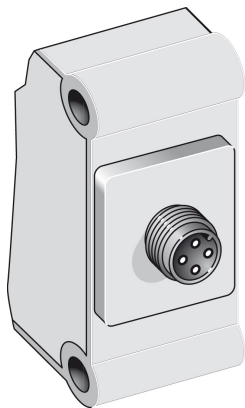
Connection diagram



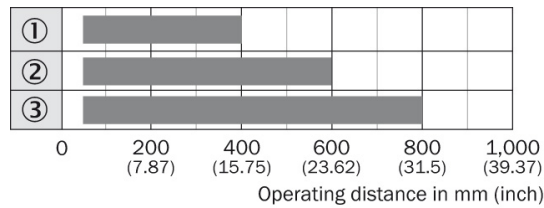
Characteristic curve



Connection type



Sensing range diagram



- ① Scanning distance on black, 6 % remission
- ② Scanning distance on grey, 18 % remission
- ③ Scanning distance on white, 90 % remission

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